

# PATENT COOPERATION TREATY

# PCT

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY (Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

Applicant's or agent's file reference 093144-9030 WO	<b>FOR FURTHER ACTION</b>	See item 4 below
International application No. PCT/US2005/031248	International filing date ( <i>day/month/year</i> ) 01 September 2005 (01.09.2005)	Priority date ( <i>day/month/year</i> )
International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237		
Applicant VULCAN LEAD, INC.		

1.	This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 <i>bis</i> .1(a).																								
2.	<p>This REPORT consists of a total of 4 sheets, including this cover sheet.</p> <p>In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.</p>																								
3.	<p>This report contains indications relating to the following items:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 10%; text-align: center;"><input checked="" type="checkbox"/></td> <td style="width: 30%;">Box No. I</td> <td style="width: 60%;">Basis of the report</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td>Box No. II</td> <td>Priority</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td>Box No. III</td> <td>Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td>Box No. IV</td> <td>Lack of unity of invention</td> </tr> <tr> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td>Box No. V</td> <td>Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td>Box No. VI</td> <td>Certain documents cited</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td>Box No. VII</td> <td>Certain defects in the international application</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td>Box No. VIII</td> <td>Certain observations on the international application</td> </tr> </table>	<input checked="" type="checkbox"/>	Box No. I	Basis of the report	<input type="checkbox"/>	Box No. II	Priority	<input type="checkbox"/>	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability	<input type="checkbox"/>	Box No. IV	Lack of unity of invention	<input checked="" type="checkbox"/>	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement	<input type="checkbox"/>	Box No. VI	Certain documents cited	<input type="checkbox"/>	Box No. VII	Certain defects in the international application	<input type="checkbox"/>	Box No. VIII	Certain observations on the international application
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4.	The International Bureau will communicate this report to designated Offices in accordance with Rules 44bis.3(c) and 93bis.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44bis .2).																								

<p>The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland</p> <p>Facsimile No. +41 22 338 82 70</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 2px;">Date of issuance of this report 04 March 2008 (04.03.2008)</td> </tr> <tr> <td style="padding: 2px;"> Authorized officer   <div style="text-align: center; font-weight: bold;">Athina Nickitas-Etienne</div> e-mail: pt04.pct@wipo.int </td> </tr> </table>	Date of issuance of this report 04 March 2008 (04.03.2008)	Authorized officer  <div style="text-align: center; font-weight: bold;">Athina Nickitas-Etienne</div> e-mail: pt04.pct@wipo.int
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# PATENT COOPERATION TREATY

From the  
INTERNATIONAL SEARCHING AUTHORITY

# PCT

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

To: Gayle A. Bush  
Michael Best & Friedrich LLP  
100 East Wisconsin Avenue, Suite 3300  
Milwaukee, WI 53202-4108

Date of mailing  
(day/month/year) **22 FEB 2007**

Applicant's or agent's file reference  
093144-9030 WO

**FOR FURTHER ACTION**  
See paragraph 2 below

International application No.  
PCT/US05/31248

International filing date (day/month/year)  
01 September 2005

Priority date (day/month/year)

International Patent Classification (IPC) or both national classification and IPC  
IPC(8) - F42B 39/14 (2007.01)  
USPC - 250/506.1, 515.1; 86/50

Applicant **VULCAN LEAD, INC.**

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/US  
Mail Stop PCT, Attn: ISA/US  
Commissioner for Patents  
P.O. Box 1450, Alexandria, Virginia 22313-1450  
Facsimile No. 571-273-3201

Date of completion of this opinion  
11 January 2007

Authorized officer:  
Blaine Copenheaver

PCT Helpdesk: 571-272-4300  
PCT OSP: 571-272-7774

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/US05/31248

Box No. I Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of:  
☒ the international application in the language in which it was filed  
☐ a translation of the international application into \_\_\_\_\_, which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).
2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
  - a. type of material  
☐ a sequence listing  
☐ table(s) related to the sequence listing
  - b. format of material  
☐ on paper  
☐ in electronic form
  - c. time of filing/furnishing  
☐ contained in the international application as filed  
☐ filed together with the international application in electronic form  
☐ furnished subsequently to this Authority for the purposes of search
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/US05/31248

**Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

**1. Statement**

Novelty (N)	Claims	1-42	YES
	Claims	None	NO
Inventive step (IS)	Claims	None	YES
	Claims	1-42	NO
Industrial applicability (IA)	Claims	1-42	YES
	Claims	None	NO

**2. Citations and explanations:**

Claims 1-42 lack(s) an inventive step under PCT Article 33(3) as being obvious over Rogers et al. (3,820,435) in view of Mussman (5,883,394).

Regarding claims 1, 11, 13, 14, 19, 20, 22, 23, 26, 29-31, 36, 39 and 40, Rogers et al. disclose a device containment vessel substantially as claimed as shown in Figures 1-4 and 8 to reduce the exposure to radioactive material (col.1, lines 18-31) shielded by a panel shaped to complement a contour of the vessel. However, Rogers et al does not disclose a plurality of panels with overlapping seams or the radiation material formed of lead and stainless steel. Mussman teaches, in the analogous field of radiation containment, a plurality of panels with overlapping seams (as shown in Fig.1) along with the radiation material formed of lead and stainless steel (col.8, lines 40-47) both as an alternative radiation shielding material and panel configuration. It would have been obvious to one skilled in the art at the time of invention to modify Rogers et al's panel to consist of a plurality of panels with overlapping seams along with the radiation material formed of lead and stainless steel, both as an alternative radiation shielding material and panel configuration taught by Mussman.

Regarding claims 2, 3, 15, 17, 27, 28, 41 and 42 wherein the panels are arranged to surround an exterior surface of the vessel and wherein the panels are positioned adjacent an interior surface of the vessel (Rogers et al., top of Fig.3, "2").

Regarding claims 4, 12, 21, 32 and 37, further comprising an end cap formed of radiation shielding material, the end cap positioned at one end of the plurality of panels to cap an opening formed at the end of the plurality of panels and further comprising a door, the door shield coupled to an exterior surface of the door (Rogers et al., Fig.2, "4").

Regarding claims 5-7, 16, 24 and 33-35, further comprising a frame wherein the vessel is at least partially disposed within the frame and the panels are coupled to the frame and wherein the frame is mounted to the vessel and wherein the vessel is supported by a base and the frame is mounted to the base (Rogers et al., Fig.1).

In regard to claims 8, 10, 18, 25 and 38, and further comprising a supplemental shield formed of a radiation shielding material and selectively coupled to the frame, the supplemental shield being positioned relative to the plurality of panels wherein the plurality of panels are positioned between the supplemental shield and the vessel (Rogers et al, Figs.1-2, "24").

Regarding claim 9, the use of lead wool blanket is disclosed in Mussman (col.2, lines 12-15) as an obvious shield material. It would have been obvious to one skilled in the art at the time of invention to modify Rogers et al's supplemental shield to include a lead wool blanket, as taught by Mussman, to provide a cost effective, readily available material for the supplemental shield.

Claims 1-42 meet the criteria set out in PCT Article 33(4), and thus have industrial applicability because the subject matter claimed can be made or used in industry.



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Date	20-02-2008
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Reference DE/P05546EP	Application No./Patent No. 05858097.8 - 1260
Applicant/Proprietor Vulcan Lead, Inc.	

In reply to your letter dated 13.02.08 we hereby inform you that the European phase begins on 01.04.08 after which EPO Form 1226 will be sent to you setting a timelimit within which you can reply; after that particular timelimit has passed, a European supplementary searchfile will be printed and given to an examiner; since at this moment it is not known yet who will be the examiner, we can not yet inform you when the European supplementary search report will be issued.

RECEIVING SECTION



**Registered letter**  
EPO Form 2901 12.07 13.02.08

MV03101